



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,751	05/19/2005	Jorg L. Schulte	LU6010	8320

26474 7590 06/15/2006

NOVAK DRUCE DELUCA & QUIGG, LLP
1300 EYE STREET NW
SUITE 400 EAST TOWER
WASHINGTON, DC 20005

EXAMINER

NAZARIO GONZALEZ, PORFIRIO

ART UNIT	PAPER NUMBER
1621	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/509,751	SCHULTE ET AL.	
	Examiner	Art Unit	
	Porfirio Nazario-Gonzalez	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 1, the phrase "e.g" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 1621

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-6, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adamczyk et al., J.Org. Chem., Vol. 49, pp. 4226-4237 in view of U.S. Patent No. 5,789,634. Adamczyk et al. discloses a process for the production of alkyl-substituted indenenes. See page 4233, under "General procedure for the preparation of 4-alkylindans 12 from 7-bromo-1H-indene". In the Adamczyk et al. article, 7-methyl-1H-indene was produced by the reaction of 7-bromo-1H-indene with methylmagnesium bromide in the presence of the catalyst $[\text{Ni}(\text{dppp})_2]\text{Cl}$ in ether. The difference between the instant application and the Adamczyk et al. article is the use of chloro-indenes and the corresponding Grignard reagent in the instant process compared to bromo-indenes and the corresponding Grignard reagent in the Adamczyk et al. process as the starting materials. The '634 patent generically teaches the addition of aryl group to a 2-substituted-7-haloindene using a Grignard reagent in the presence of $\text{Ni}(\text{dpp})$ in ether as a catalyst. See Figure 4. Further the '634 patent teach that said indene derivatives are used in the synthesis of metallocene compounds, which are useful as catalyst precursors for olefin of polymerization. See Abstract and Background the Invention. The key features of the '634 teaching are that (1) the use of Grignard reagents containing chloro, bromo or iodo atoms (they are equivalents) and (2) the halogen atom in the 7 position of the indene is the same halogen in the Grignard reagent, that is, if the indene is a 7-chloroindene then the Grignard reagent is RMgCl . Therefore, one skilled in the art would be motivated to substitute the bromo Grignard reagent with a chloro Grignard reagent with the expectation producing a similar result, that is, the insertion of

Art Unit: 1621

the organic moiety of the Grignard reagent at the 7 position of the indene. Applicants raised the issue of cost when using bromoindenes as starting materials. See page 1, lines 23-35. However, an ordinary artisan would be aware of the cost of using bromo derived reagents in the Adamczyk et al. article and would modify the process accordingly to avoid such high cost by substituting the bromo derived reagents with chloro derived reagents since they are expected to give similar results (the insertion into the C-halogen bond of the indene reagent) as taught by the '634 patent. Furthermore, one skilled in the art would use said indene derivatives to synthesize metallocene compounds and use them for the polymerization of α -olefins as taught by the '634 patent.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,789,634. The '634 patent discloses the compounds 2-methyl-7-phenylindene (Example 4) and 2-methyl-7-(1-naphthyl)indene (Example 6) which are used in the production of metallocene catalyst for olefin polymerizations. The '634 compounds differ from the compounds of claim 7 in the presence of a CH_2 group. The '634 compounds lack the CH_2 group between the indene ring and the phenyl or 1-naphthyl group in the 7 position. The compounds of instant claim 7 recite the group CH_2R^4 where R^4 is an aryl group at the 7 position of the indene ring. The instant claimed compounds and the compounds of the '634 patent are adjacent homologs, that is, they differ by a CH_2 group. Thus, absent unexpected results they are considered prima facie obvious. In re Henze, 85 USPQ 261, 263 (CCPA 1950).

Art Unit: 1621

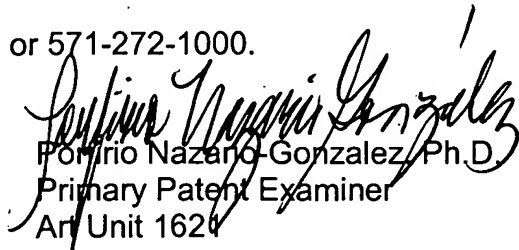
Allowable Subject Matter

8. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Porfirio Nazario-Gonzalez whose telephone number is 571-272-0641. The examiner can normally be reached on Mon.-Fri. (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Porfirio Nazario-Gonzalez, Ph.D.
Primary Patent Examiner
Art Unit 1621

DNG
June 11, 2006